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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,589	04/03/2002	Jaakko Vihriala	4925-207PUS	9706

7590 10/17/2006  
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EXAMINER
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RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/049,589

Applicant(s)

VIHRIALA, JAAKKO

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Response, filed 13 April 2006, with respect to the rejection(s) of claim(s) 1-6 and 9-14 under Bodin (WO 98/15150) and Chia (USPN 5,394,158) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dahlman et al. (USPN 6,526,039).

2. The indicated allowability of claims 7, 8, 15, and 16 is withdrawn in view of the newly discovered reference(s) to Papasakellariou et al. (USPN 6,275,483). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Dahlman et al. (USPN 6,526,039).

5. Regarding claims 1 and 9, Applicant discloses as prior art a method for performing synchronization of a mobile network device to a network control device of a present radio network region and a network control device for synchronizing with a network device, the method comprising the steps of and the network control device comprising means for: detecting that a handover from a source radio network region to said present radio network region has been

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performed (p. 2, line 33-p. 3, line 34, where a current base station implicitly detects that a handover has occurred from a source cell to itself since the current base station thereafter begins to communicate with the mobile station, e.g. the current base station communicates the TA to the mobile where the TA is based on the propagation time between the base station and the mobile); determining a start propagation delay value (p. 2, line 33-p. 3, line 34, where any search will start with an initial value, see also p. 4, lines 25-34); and searching an actual propagation delay value by using a search strategy based on said determined start propagation delay value (p. 2, line 33-p. 3, line 34 and p. 4, lines 25-34, where the current base station searches for the propagation delay value using minimum propagation delay and a maximum propagation delay for a cell).

Applicant does not admit as prior art detecting a source radio network region from which a handover of said mobile network device to said present radio network region has been performed and determining the start propagation delay value based on said detected source radio network region of said mobile station. Dahlman teaches, in a system for performing a delay search for synchronization purposes, detecting a source radio network region from which a handover of said mobile network device to said present radio network region has been performed (col. 6, lines 3-18, where the BSC stores a table containing a list of the delays between a source BS and neighboring BSs, such that any use of this information requires knowledge of the source BS and the neighboring BS, i.e. the current BS of Applicant, see also col. 2, lines 11-15) and determining the start delay value based on said detected source radio network region of said mobile station (col. 6, lines 25-36, where the start delay value is determined based on the source and current base station and then used when performing a search). Dahlman discloses that using a start delay value based on a detected source radio network region when performing a search

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reduces search time (col. 5, lines 3-11). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the delay information of Dahlman in the network of Applicant's admitted prior art by detecting a source radio network region from which a handover of said mobile network device to said present radio network region has been performed and determining the start propagation delay value based on said detected source radio network region of said mobile station in order to reduce propagation delay search time.

6. Regarding claims 2 and 10, Applicant's admitted prior art in view of Dahlman discloses that start propagation delay values are stored in a database for a plurality of adjacent sectors (Dahlman: col. 4, lines 30-47, see also col. 6, lines 3-18).

7. Regarding claims 3 and 11, Applicant's admitted prior art in view of Dahlman discloses updating said database with said searched actual propagation delay value after performing said search step (Dahlman: col. 6, lines 14-18, see also col. 6, lines 31-36).

8. Regarding claims 4 and 12, Applicant's admitted prior art in view of Dahlman discloses that one start propagation value is stored for each adjacent sector (Dahlman: col. 4, lines 30-47, where "one start propagation value" is interpreted to mean "at least one" rather than "only one," see also col. 6, lines 3-18).

9. Regarding claims 5 and 13, Applicant's admitted prior art in view of Dahlman discloses that for each adjacent sector the estimate is updated using a plurality of start propagation values (col. 6, lines 14-18, see also col. 6, lines 31-36). Applicant's admitted prior art in view of Dahlman does not expressly disclose using an average of said plurality of start propagation values as a basis for said search strategy. However, Examiner takes official notice that averaging is a well-known mechanism for combining a plurality of estimates into a single estimate. As

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such, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an average of said plurality of start propagation values as a basis for said search strategy.

10. Regarding claims 6 and 14, Applicant's admitted prior art in view of Dahlman discloses that a distribution of said plurality of start propagation values is also used as the basis for said search strategy (Dahlman: col. 6, lines 3-18, where the database is distributed to the device which is going to use the estimate to perform the search).

11. Claims 7, 8, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Dahlman et al. (USPN 6,526,039) as applied to claims 1 and 9 above, and further in view of Papasakellariou et al. (USPN 6,275,483).

12. Regarding claims 7, 8, 15, and 16, Applicant's admitted prior art in view of Dahlman does not expressly disclose that said search strategy is expanding window or z-search.

Papasakellariou teaches, in a mobile communication system, that expanding window and z-search are conventional search techniques to search a search window (col. 5, lines 31-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to search the search window of Applicant's admitted prior art in view of Dahlman by using expanding window or z-search, which are conventional search techniques.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tiedemann, Jr. et al. (US 2001/0021179) see entire document which pertains to enabling faster acquisition of a system after handoff.

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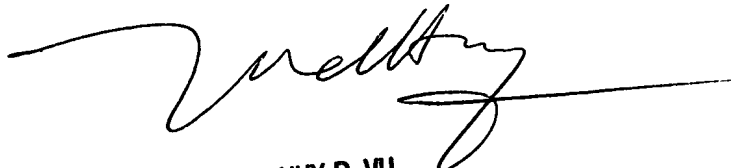
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman  
Examiner  
Art Unit 2616

*DJR*



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